

i560

SERVICE MANUAL

Canon

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PIXUS 560i i560 REFERENCE MANUAL

(Differences from the base model, PIXUS 850i / i850, only)

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Inkjet Quality Assurance Center 1

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<PRODUCT SPECIFICATIONS>

(1) Features (Major differences from the PIXUS 850i / i850)

- Camera Direct Printing
(Bubble Jet Direct and the PictBridge Camera Direct Printing standard are supported.)
- BCI-6 color ink tanks supported (BCI-6C / M / Y instead of BCI-3C / M / Y)
- Flash ROM (overwritable when the ROM is upgraded)
- Smaller CD-R tray feeder, with improved CD-R tray

(2) Printer Specifications

Type	Desktop serial color bubble jet printer				
Paper feeding method	Auto sheet feed				
Resolution	4,800 x 1,200 dpi (Max.)				
Throughput (Target value)	Draft		Standard		
	Black (New Black)	22 ppm	13 ppm		
	Color (New Color)	15 ppm	9 ppm		
Printing direction	Bidirectional, uni-directional				
Print width	Max. 203.2 mm (220.9 mm in borderless printing)				
Interface	USB 2.0 Full Speed, IEEE1284				
ASF stacking capacity	Plain paper (65 g/m ²): Max. 13 mm (Approx. 150 sheets)				
Paper weight	64 to 105 g/m ²				
Detection functions	- Cover open - Remaining ink amount (optical / dot count) - Paper out - Waste ink amount - Pick-up roller - Carriage position - Supported camera direct printing device - Presence of print head - Printing position - Paper end sensor - Internal temperature - Paper feed roller position - Head-to-paper distance				
Acoustic noise	Approx. 39 dB (Photo Paper Pro / fine mode)				
Environmental requirements	During operation	Temperature	5 to 35C (41 to 95F)		
		Humidity	10 to 90% RH (no condensation)		
	Non operation	Temperature	0 to 40C (32 to 104F)		
		Humidity	5 to 95% RH (no condensation)		
Power supply	Power supply voltage	Frequency	Power consumption	Standby	Power-off
	AC 100 to 127 V	50/60 Hz	Approx. 24 W	Approx. 0.4 W	Approx. 0.2 W
	AC 220 to 240 V	50/60 Hz	Approx. 24 W	Approx. 0.5 W	Approx. 0.3 W
External dimensions	Printer:				
	With the paper rest and output tray retracted:		Approx. 418 (W) x 274 (D) x 172 (H) mm		
	With the paper rest and output tray pulled out:		Approx. 418 (W) x 545 (D) x 276 (H) mm		
Weight	Approx. 4.8 kg (not including the print head and ink tanks)				
Related standards (Proposed) (Printer, Adapter)	Electromagnetic radiance:				
	VCCI, FCC, IC, C-tick, Taiwan EMC, Korea EMC, CCIB, CCEE				
	Electrical safety:				
	Electrical Appliance and Material Control Law (DENTORI), UL, C-UL, CB Report, GS, CE Mark, FIMKO, CCIB (EMC), AS, CCEE, PSB, Electrical Safety Regulations of Korea, SASO				
	Environmental regulations:				
	Energy Star, Blue Angel, Environment label				
Serial number location	On the carriage flexible cable holder (visible when the front cover is open, same as the i850).				
Remaining ink amount detection	Available (automatic detection by optical method and dot count, enabled at default)				

(3) Print Head / Ink Tanks Specifications

- Print head: QY6-0042 (same as the PIXUS 850i / i850)
- Ink tanks: BCI-3eBK, BCI-6C, BCI-6M, and BCI-6Y

(4) Paper Specifications (Canon-recommended)

Type	Name	Size	Paper feeding method	ASF stacking capacity	Camera Direct Printing
Plain paper	64 to 105 g/m ²	A4, B5, LTR, A5, LGL	ASF	13 mm	
High resolution paper	HR-101	A4, LTR	ASF	Approx. 80 sheets	
Glossy Photo Paper	GP-401	A4, LTR	ASF	10 sheets	
	GP-401 4 x 6	101.6 x 152.4 mm	ASF	20 sheets	
Photo Paper Pro	PR-101	A4, LTR	ASF	10 sheets	Yes
	PR-101 4 x 6	101.6 x 152.4 mm	ASF	20 sheets	Yes
Photo Paper Plus Glossy	PP-101	A4, LTR	ASF	10 sheets	Yes
	PP-101 4 x 6	101.6 x 152.4 mm	ASF	20 sheets	Yes
	PP-101 5 x 7	127 x 178 mm	ASF	10 sheets	Yes
Matte Photo Paper	MP-101	A4, LTR	ASF	10 sheets	
Photo Paper Plus Semi-gloss	SG-101	A4, LTR	ASF	10 sheets	
	SG-101 4 x 6	101.6 x 152.4 mm	ASF	20 sheets	
Transparency	CF-102	A4, LTR	ASF	30 sheets	
T-shirt transfer	TR-301	A4	ASF	1 sheet	
Envelope	COM #10	241 x 106 mm	ASF	10 envelopes	
	DL-size	220 x 110 mm	ASF	10 envelopes	
Photo Paper Pro	PC-101S	119 x 216 mm	ASF	20 sheets	

1. MAINTENANCE

1-1. Error Display / Warning Indication

Errors are indicated by the LED, and warnings are displayed on the monitor of the computer connected to the printer.

(1) Operator call errors (by LED blinking in orange)

LED blinking in orange	Error	Solution	Remarks
2 times	No paper.	Set paper, and press the Resume/Cancel button.	
3 times	Paper jam.	Remove the jammed paper, and press the Resume/Cancel button.	
4 times	No ink.	Replace the empty ink tank(s). (Pressing the Resume/Cancel button will exit the error without ink tank replacement.)	
5 times	The print head is not installed properly.	- Install the print head, and close the front cover. - With the print head installed, turn the printer off and on. - Re-install the print head.	
8 times	Warning: The waste ink absorber is almost full (approx. 95% of the maximum capacity).	Pressing the Resume/Cancel button will exit the error, and enable printing. In repair servicing, replace the bottom case unit (QM2-0647), or 5-item set of the ink absorbers (QA4-1012/1013/1014/1015/1055).	The service call error, indicating the waste ink absorber is full, is likely to occur soon.
9 times	The connected digital camera or digital video camera does not support Camera Direct Printing.	After removing the cable between the camera and the printer, press the Resume/Cancel button, and re-connect the cable.	

(2) Service call errors (by LED blinking alternately in orange and green, or lit in orange)

LED alternate blinking in orange and green	Error	Solution (Replacement of listed parts, which are likely to be faulty)
2 times	Carriage error	- Carriage unit (QM2-0655 / QM2-0831) - Timing slit strip film (QA4-1053) - Logic board ass'y (QM2-0750 / QM2-0751) ^{*1} - Carriage motor (QK1-0175)
3 times	Paper feed error	- Timing sensor unit (QG4-0277) - Timing slit disk film (QC1-2781) - Feed roller ass'y (QF4-0155) - Platen unit (QM2-0650 / QM2-0828) - Logic board ass'y (QM2-0750 / QM2-0751) ^{*1} - Paper feed motor (QK1-0224)
4 times	Purging error	- Purge unit (QM2-0825) - Logic board ass'y (QM2-0750 / QM2-0751) ^{*1}
6 times	Internal temperature error	- Logic board ass'y (QM2-0750 / QM2-0751) ^{*1}
7 times	Waste ink absorber full	- Ink absorber (QA4-1012 / 1013 / 1014 / 1015 / 1055) - Bottom case unit (QM2-0647)
8 times	Print head temperature rise	- Print head (QY6-0042) - Logic board ass'y (QM2-0750 / QM2-0751) ^{*1}
9 times	EEPROM error	- Logic board ass'y (QM2-0750 / QM2-0751) ^{*1}
13 times	USB Host VBUS overcurrent	- Logic board ass'y (QM2-0750 / QM2-0751) ^{*1} - DCD board ass'y (QM2-0825)
15 times	Other hardware error	- Logic board ass'y (QM2-0750 / QM2-0751) ^{*1}
Continuous alternate blinking	Flash ROM error	- Logic board ass'y (QM2-0750 / QM2-0751) ^{*1}
Lights in orange	RAM error	- Logic board ass'y (QM2-0750 / QM2-0751) ^{*1}

*1: Before replacement of the logic board ass'y, check the waste ink amount (by service test print or EEPROM information print). If the waste ink amount is 7% or more, also replace the bottom case unit (QM2-0647) or the 5-item set of the ink absorbers (QA4-1012/1013/1014/1015/1055) when replacing the logic board.

(3) Warnings

Displayed warning	Remarks
Low ink of 3eBK, 6C, 6M or 6Y (at detection of no remaining of raw ink)	The status is displayed on the monitor of the computer connected to the printer.
Print head temperature rise	If the print head temperature is high when the front cover is opened, the warning is displayed ^{*1} . When the print head temperature falls, the warning is released.
Protection of excess rise of the print head temperature	If the print head temperature exceeds the specified limit, a Wait is inserted during printing,

*1: At the warning, the carriage does not move to the ink tank replacement position when the front cover is opened.

2. REPAIR

2-1. Adjustment / Repair

(1) Service mode

The basic operations are the same as those of the PIXUS 850i / i850. (Refer to the PIXUS 850i / i850 Service Manual.)

In this section, destination settings and EEPROM information printing, which differs from those of the PIXUS 850i / i850, are detailed.

<Service mode operation procedures>

- 1) Turn off the printer. While pressing the Resume/Cancel button, press the Power button. (Do not release the buttons. The LED lights in green to indicate that a function is selectable.)
- 2) While holding the Power button, release the Resume/Cancel button. (Do not release the Power button.)
- 3) While holding the Power button, press the Resume/Cancel button 2 times, and then release the Power and Resume/Cancel buttons. (Each time the Resume/Cancel button is pressed, the LED lights alternately in either orange or green, starting with orange.)
- 4) When the LED lights in green, press the Resume/Cancel button the specified number of time(s) according to the function listed in the table below. (Each time the Resume/Cancel button is pressed, the LED lights alternately in either orange or green, starting with orange.)

Time(s)	LED	Function	Remarks
0 times	Green	Power off	When the print head is not installed, the carriage returns and locks in the home position.
1 time	Orange	Service test print	
2 times	Green	EEPROM information print	(Different from the PIXUS 850i / i850)
3 times	Orange	EEPROM initialization	
4 times	Green	Waste ink counter resetting	
5 times	Orange	Destination settings	Proceed to the following steps 5) and 6), to set the destination (different from the PIXUS 850i / i850).
6 times	Green	Print head deep cleaning	
7 times	Orange	CD-R test print	For the Japanese model.
8 times	Green	CD-R print position adjustment (horizontal)	For the Japanese model.
9 times	Orange	CD-R print position adjustment (vertical)	For the Japanese model.
10 times	Green	Return to the menu selection	

- 5) After the function (menu) is selected, press the Power button. The LED lights in green, and the selected function is performed. (When the operation completes, the printer returns to the menu selection mode automatically.)

To set the destination:

- 6) Press the Resume/Cancel button the specified number of time(s) according to the destination listed in the table below, and press the Power button.

Time(s)	LED	Destination
1 time	Orange	Japan: PIXUS 560i
2 times	Green	Overseas (A4): i560
3 times	Orange	Overseas (LTR): i560 (LTR)

Note: After destination settings, print the EEPROM information as shown below, and confirm the model name.

<EEPROM information contents>

Print sample:

PIXUS 560i V1.02 CN(USB=1 1284=0) USB=(BCDEFG) D=004.5 ST=2001/09/27-18:30
ER(TIME=2001/09/09-09:09 ER0=1000 ER1=5100) PC(M=002 R=000 T=001 D=009 C=009)
CH=00002 CT(Bk=040 C=109 M=012 Y=113) PWC(S=00009 h=005) WP=0024 CDIN=000
PAGE(All=00083 PP=00035 HR=00003 PR=00000 SP=00000 MP=00000 PC=00000 OTH=00000)
EDGE=00000 L=00000 2L=00000 CDR=0000 CDPAGE(A4=000 L=000 PC=000 OTH=000)
UR(C=000 BK=000 BK-C=+02 Y=000 M=000 G=+01 H=-01) REG(BK=00 CL=00)
DC(BK=00000 C=00000 M=00001 Y=00000) IC(BK=0 C=0 M=1 Y=0) CDR=(-00005,-00029)
CDRS=(000) Head TempBK=18.5 Head TempC=17.5 Env Temp=30.0 FF(3F 3F 3F)

HDEEPROM

V0000

SN=0318-A43D

LN(00000 00000 00001 00003 00001 00000 00000)

ID=00

IL=(BK=+00 C1=+00 M1=+00 Y=+00 C2=+00 M2=+00)

DI(BK=+001 CL=+001)

Printed items:

1. Model name
2. ROM version
3. Connected I/F (USA/1284)
4. USB No.
5. Waste ink amount
6. Installation date
7. Operator call/service call error record (time, record 0/1)
8. Number of times of purging (M/R/T/D/C)
9. Number of times of print head installation and removal
10. Number of times of ink tank installation and removal (Bk/C/M/Y)
11. Number of times of power-on (hard/soft)
12. Number of times of wiping
13. Number of times of camera port connection and removal
14. Number of print pages (total/plain paper/high resolution paper/Photo Paper Pro/Photo Paper Plus Glossy/Matte Photo Paper/Card/Other)
15. Number of borderless print pages, total, L, 2L, CD-R, number of Camera Direct Print pages (A4 = Letter, L = 4 x 6, card, other)
16. User print head alignment values (Codd <=> Ceven, Bkodd <=> Bkeven, Bk <=> C, Yodd <=> Yeven, Modd <=> Yeven, G, H)
17. Bidirectional registration (Black/Color)
18. Dot count (Bk/C/M/Y)
19. Raw ink presence (Bk/C/M/Y)
20. CD-R print position adjustment
21. CD-R S calibration
22. Print head temperature (Bk, Color)
23. Inside temperature
24. Line inspection information

HDEEPROM

26. Version

27. Serial number

28. Lot number

29. Print head ID

30. Ink ejection level (Bk/C1/M1/Y/C2/M2)

31. DI sensor correction value

(2) Flash ROM upgrade

Upgrade the flash ROM by downloading all data to the printer via the USB interface.

<Flash ROM upgrade file>

The upgrade file will be uploaded to the SSIS system each time an upgrade occurs.

<Procedures for upgrading the flash ROM>

The flash ROM upgrade procedures will be given in the Service Information bulletin at each upgrade.

Note: The printer can be upgraded in the user mode. No special tool such as those required for upgrade of the PIXUS 50i / i70 flash ROM is necessary. (Procedures are simpler and easier than those for the PIXUS 50i / i70)

Preconditions (for reference):

- Printer host computer:
 - USB cable connection (Connect only 1 printer to the host computer.)
- OS: Windows 98SE, Windows Me, Windows 2000, Windows XP
- Printer driver:
 - Must be installed prior to upgrading
- Printer mode when downloading the upgrade file:
 - User mode